This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

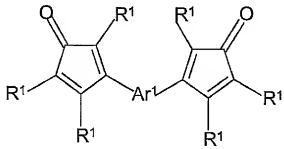
IN THE CLAIMS:

1. (Currently Amended): A process of removing impurities from a cured low dielectric constant organic polymeric film disposed on a semiconductor device comprising disposing a low dielectric constant curable polyarylene resin film on an electrically conductive surface of a semiconductor device; curing said polyarylene resin film disposed on said semiconductor device; and contacting said cured polyarylene resin film with supercritical carbon dioxide and, optionally, one or more solvents whereby residual solvents, unreacted monomers and byproducts of curing are removed.

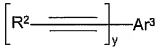
2. (Cancelled).

3. (Previously Presented): A process in accordance with Claim 1 wherein said polyarylene resin is formed from a precursor composition which comprises a compound having cyclopentadiene functional groups, acetylene functional aromatic compounds and/or partially polymerized reaction products of said compounds.

4. (Original): A process in accordance with Claim 3 wherein said compound having biscyclopentadienone functional groups is a biscyclopentadienone of the formula

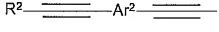


where R^1 is independently hydrogen or an unsubstituted or inertly substituted aromatic moiety; and Ar^1 is an unsubstituted or inertly substituted aromatic moiety; and said acetylene functional aromatic compound is a polyfunctional acetylene of the formula



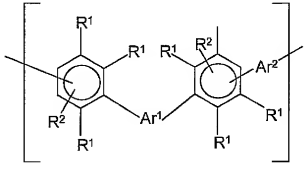
where R^2 is independently hydrogen or an unsubstituted or inertly substituted aromatic moiety; Ar^3 is an unsubstituted or inertly substituted aromatic moiety; and y is an integer at least 3.

5. (Original): A process in accordance with Claim 4 wherein said precursor composition includes a diacetylene of the formula

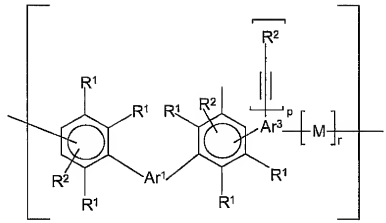


where Ar^2 is an unsubstituted or inertly substituted aromatic moiety; and R^2 has the meanings given above.

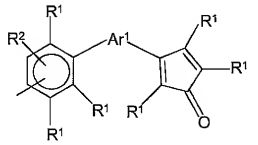
6. (Original): A process in accordance with Claim 4 wherein said precursor composition comprises a curable polymer of the formula $[A]_w[B]_z[EG]_v$
where A has the structure

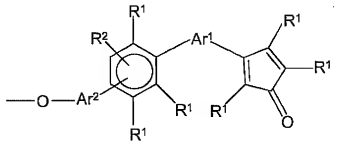


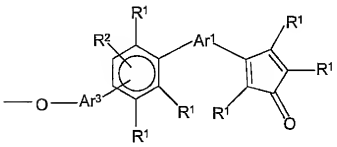
B has the structure

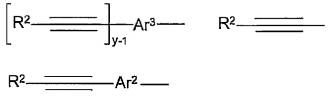


and EG are end groups having a formula



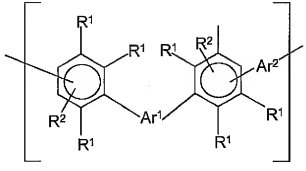




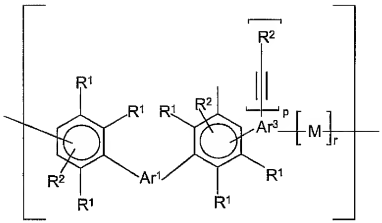


where R^1, R^2, Ar^1, Ar^3 and y have the meanings given above; M is a bond; p is the number of unreacted acetylene groups in the given mer unit; r is 1 less than the number of reacted acetylene groups in the given mer unit, with the proviso that p+r=y-1; w is an integer of 0 to about 1,000; z is an integer of 1 to about 1,000; and v is an integer of at least 2.

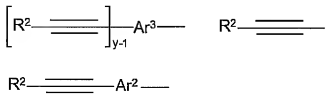
7. (Original): A process in accordance with Claim 5 wherein said precursor composition comprises a curable polymer of the formula $[A]_w[B]_z[EG]_v$ where A has the structure



B has the structure



and end groups EG have the formula



where R^1, R^2, Ar^1, Ar^2, Ar^3 and y have the meanings given above; M is a bond; p is the number of unreacted acetylene groups in the given mer unit; r is 1 less than the number of reacted acetylene groups in the given mer unit, with the proviso that p+r=y-1, w is an integer of 0 to about 1,000; z is an integer of 1 to about 1,000; and v is an integer of at least 2.

8. (Cancelled).

9. (Previously Presented): A process in accordance with Claim 18 wherein said poly(silsesquioxane) is poly(methylsilsesquioxane).

10. (Previously Presented): A process in accordance with Claim 18 wherein said poly(silsesquioxane) is poly(hydridosilsesquioxane).

11. (Original): A process in accordance with Claim 9 wherein said poly(methylsilsesquioxane) is cured at a temperature of up to about 450°C.

12. (Original): A process in accordance with Claim 10 wherein said poly(hydridsilsesquioxane is cured at a temperature of up to about 210°C.

13. (Previously Presented): A process in accordance with Claim 1 wherein said polyarylene resin film is an interlevel or intralevel dielectric in said semiconductor device.

14. (Previously Presented): A process in accordance with Claim 1 wherein said supercritical carbon dioxide contacts said cured low dielectric constant polyarylene resin film with at least one solvent.

15. (Original): A process in accordance with Claim 14 wherein said solvent is selected from the group consisting of cyclohexanone, methylisobutylketone, mesitylene, alcohols having the structural formula ROH, where R is C_4-C_{10} alkyl or C_5-C_{10}-cycloalkyl, and C_5-C_8 cycloalkyls.

16. (Original): A process in accordance with Claim 15 wherein said solvent is present in a concentration in a range of between about 1% and about 80%, said percentages being by volume, based on the total volume of said supercritical carbon dioxide-solvent composition.

17. (Original): A process in accordance with Clam 16 wherein said solvent is present in a concentration in a range between about 1% and about 50%.

18. (Currently Amended): A process of removing impurities from a cured low dielectric constant organic polymeric film disposed on a semiconductor device comprising

disposing a low dielectric constant curable poly(silesquioxane) film on an electrically conductive surface of a semiconductor device; curing said poly(silesquioxane) film disposed on said semiconductor device; and contacting said cured ~~poly(silesquioxanes)~~ poly(silesquioxane) film with supercritical carbon dioxide and, optionally, one or more solvents whereby residual solvents, unreacted monomers and by products of curing are removed.